

INTRACELLULAR DELIVERY OF SMALL MOLECULES, PROTEINS, AND
NUCLEIC ACIDS

Abstract of the Invention

An amino acid sequence Arg-Lys-Met-Leu-Lys-Ser-Thr-Arg-Arg-Gln-Arg-Arg (SEQ ID NO:1) functions as a protein transduction domain (PTD) and is capable of delivering small molecules, proteins, and nucleic acids to an intracellular compartment of a cell. An amino terminal lysine linker improves the efficiency of the PTD. A nuclear localization signal can be used to target the PTD to a cell's nucleus. The PTD can be used in PTD-cargo moiety complexes that can reversibly immortalize cells and increase cell viability in culture.